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Dated: September 5, 2003

Signature

Nabeela R. McMillian

Docket No.: 01017/32953A
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application of: Zsebo *et al.*

Application No.: 09/604,325

Group Art Unit: 1647

Filed: June 26, 2000

Examiner: Bridget E. Bunner

For: METHOD OF STIMULATING GROWTH OF
MELANOCYTE PRECURSOR CELLS AND
TREATMENT OF PIGMENTATION
DISORDER BY ADMINISTERING STEM
CELL FACTOR

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INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner for Patents
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Alexandria, VA 22313-1450

Dear Sir:

Pursuant to 37 CFR 1.56, the attention of the Patent and Trademark Office is hereby directed to the references listed on the attached modified Form PTO - 1449. It is respectfully requested that the information be expressly considered during the prosecution of this application, and that the references be made of record therein and appear among the "References Cited" on any patent to issue therefrom.

Submitted herewith is a modified Form PTO-1449 listing several documents. Copies of documents A1-A30, B1-B14 and C1-C65 have been submitted in related application no. 09/635,251, filed August 7, 2000 and pursuant to 37 CFR §1.98(d), copies are not submitted herewith.

It is not intended to constitute an admission that any patent, publication or other information referred to therein is "prior art" for the instant application under any section of 35 U.S.C. §102 or 35 U.S.C. §103.

Application No.: 09/604,325

Docket No.: 01017/32953A

In accordance with 37 CFR 1.97(g), the filing of this Information Disclosure Statement shall not be construed to mean that a search has been made or that no other material information as defined in 37 CFR 1.56(a) exists. It is submitted that the Information Disclosure Statement is in compliance with 37 CFR 1.98 and the Examiner is respectfully requested to consider the listed references.

This Information Disclosure Statement is being filed after the receipt of a first office action. A fee pursuant to 37 C.F.R. §1.17(p) for the filing of the Information Disclosure Statement is enclosed herewith. No additional fees are believed to be necessary, however, the Commissioner is hereby authorized to charge any deficiency in the fees filed or credit any overpayments to our Deposit Account No. 13-2855. A duplicate copy of this paper is enclosed.

Dated: September 5, 2003

Respectfully submitted,

By 

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Form PTO-1449 (Modified)	U.S. Department of Commerce Patent and Trademark Office	Attorney Docket No. 01017/32953A	Serial No. 09/604,325
INFORMATION DISCLOSURE STATEMENT		Applicant Zsebo et al.	
		Filing Date June 26, 2000	Group 1647

U.S. PATENT DOCUMENTS							
*Examiner Initials		Document Number	Issue Date	Name	Class	Subclass	Filing Date If Appropriate
	A1	3,898,837	08/12/1975	Boege	73	23.1	
	A2	4,275,056	06/23/1981	Takaku et al.	424	99	
	A3	4,338,397	07/06/1982	Gilbert et al.	435	68	
	A4	4,353,242	10/12/1982	Harris et al.	73	23.1	
	A5	4,438,032	03/20/1984	Golde et al.	260	112	
	A6	4,634,665	01/06/1987	Axel et al.	435	68	
	A7	4,695,542	09/22/1987	Yokota et al.	435	68	
	A8	4,703,008	10/27/1987	Lin	435	240.2	
	A9	4,714,680	12/22/1987	Civin	435	240.25	
	A10	4,721,096	01/26/1988	Naughton et al.	128	1 R	
	A11	4,722,998	02/02/1988	Cantor et al.	530	351	
	A12	4,808,611	02/28/1989	Cosman	514	12	
	A13	4,810,643	03/07/1989	Souza	435	68	
	A14	4,845,078	07/04/1989	Masaoka	514	8	
	A15	4,847,325	07/11/1989	Shadle et al.	525	54.1	
	A16	4,877,729	10/31/1989	Clark et al.	435	68	
	A17	4,879,227	11/07/1989	Clark et al.	435	70	
	A18	4,959,314	09/25/1990	Mark et al.	435	69.1	
	A19	4,959,455	09/25/1990	Clark et al.	530	351	
	A20	4,965,204	10/23/1990	Civin	435	240.27	
	A21	5,087,570	02/11/1992	Weissman et al.	435	240.1	
	A22	5,119,315	06/02/1992	Kemp et al.	364	498	
	A23	5,121,337	06/09/1992	Brown	364	498	
	A24	5,599,703	02/04/1997	Davis et al.	435	373	
	A25	5,620,685	04/15/1997	Nishi et al.	424	85.1	
	A26	5,641,670	06/24/1997	Treco et al.	435	240.2	
	A27	5,767,074	06/16/1998	Besmer et al.	514	12	
	A28	5,772,992	06/30/1998	Bauer et al.	424	85.2	
	A29	5,786,323	06/28/1998	Nakahata	514	2	
	A30	5,935,565	08/10/1999	Besmer et al.	424	85.1	

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Form PTO-1449 (Modified)

U.S. Department of Commerce
Patent and Trademark Office

Attorney Docket No.

01017/32953A

Serial No.

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Applicant

Zsebo et al.

Filing Date

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FOREIGN PATENT DOCUMENTS

*Examiner Initials		Document Number	Publication Date	Country	Class	Subclass	Translation	
							Yes	No
	B1	0 232 707	08/19/1987	EPO	C12N	15/00		
	B2	EP 0 845 268	06/03/1998	EPO	A61K	38/18		
	B3	JP 8325294	12/10/1996	JP	C07K	14/52		X
	B4	JP 62-223126	10/01/1987	JP	A61K	35/12		X
	B5	JP 09154578 A	06/17/1997	JP	C12N	15/02	ABS	
	B6	JP 62-107796	05/19/1997	JP	C12F	21/00	ABS	
	B7	WO 89/04452	05/18/1989	PCT	F41H	5/04		
	B8	WO 92/03459	03/05/1992	PCT	C07H	15/12		
	B9	WO 92/07074	04/30/1992	PCT	C12N	15/12		X
	B10	WO 93/21936	11/11/1993	PCT	A61K	35/16		
	B11	WO 95/06112	03/02/1995	PCT	C12N	5/08		
	B12	WO 95/28479	10/26/1995	PCT	C12N	5/08		X
	B13	WO 98/18924	05/07/1998	PCT	C12N	15/12		
	B14	WO 98/23773	06/04/1998	PCT	C12Q	1/02		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

C1	Abstract, Kokai, October 1, 1987, "Human hematopoietic stem cell growth factor-purification and characterization," Dialog File 357 DBA Accession No. 88-01369 of JP 62-223126.
C2	Bodine et al., "Combination of Interleukins 3 and 6 Preserves Stem Cell Function in Culture and Enhances Retrovirus-Mediated Gene Transfer Into Hematopoietic Stem Cells," <i>Proc. Nat'l Acad. Sci., USA</i> , 86:8897-8901 (1989).
C3	Boswell et al., "A Novel Mast Cell Growth Factor (MCGF-3) Produced by Marrow-adherent Cells that Synergizes with Interleukin 3 and Interleukin 4," <i>Exp. Hematol.</i> , 18:794-800 (1990).
C4	Bowie et al., "Deciphering the Message in Protein Sequences: Tolerance to Amino Acid Substitutions," <i>Science</i> , 247:1306-1310 (1990).
C5	Broxmeyer et al., "Cell-Free Granulocyte Colony Inhibiting Activity Derived from Human Polymorphonuclear Neutrophils," <i>Exp. Hematol.</i> , 5:87-102 (1977).
C6	Dexter, T.M., "Haemopoietic Growth Factors," <i>I</i> , 45(2):337-349 (1989).
C7	Dick et al., "Introduction of New Genes into Hematopoietic Stem Cells," <i>J. Cell. Biol.</i> , Supplement 11A, p.187 (1987) (ABSTRACT D 026).
C8	Dick et al., "Introduction of Selectable Gene into Primitive Stem Cells Capable of Long-Term Reconstitution of the Hemopoietic System of W/W ^v Mice," <i>Cell</i> , 42:71-79 (1985).
C9	Frömmel et al., "An Estimate of the Effect of Point Mutation and Natural Selection on the Rate of Amino acid Replacement in Proteins," <i>J. Mol. Evol.</i> , 21:233-257 (1985).
C10	Fung et al., "Molecular cloning of cDNA for murine interleukin-3," <i>Nature</i> , 307:233-237 (1984).
C11	Gough et al., "Molecular Cloning of cDNA Encoding a Murine Haematopoietic Growth Regulator, Granulocyte-Macrophage Colony Stimulating Factor," <i>Nature</i> , 309:763-767 (1984).

EXAMINER

DATE CONSIDERED

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Group

1647

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

C12	Grabbe, J. et al., "Stem Cell Factor, a Novel Cutaneous Growth Factor for Mast Cells and Melanocytes," <i>Arch. Dermatol. Res.</i> , 287:78-84 (1994).
C13	Grichnik, J.M. et al., "The SCF/KIT Pathway Plays a Critical Role in the Control of Normal Human Melanocyte Homeostasis," <i>J. Invest. Dermatol.</i> , 111:233-238 (1998).
C14	Hiraoka et al., "Further Characterization of the Biological Properties of Human Hematopoietic Survival and Growth Factor," <i>Expl. Cell. Biol.</i> , 57:27-34 (1989).
C15	Hiraoka et al., "Production of Human Hematopoietic Survival and Growth Factor by a Myeloid Leukemia Cell Line (KPB-M15) and Placenta as Detected by a Monoclonal Antibody," <i>Cancer Research</i> , 47:5025-5030 (1987).
C16	Hiraoka et al., "Human Hematopoietic Survival and Growth Factor," <i>Cell Biology International Reports</i> , 10(5):347-355 (1986).
C17	Hiraoka et al., "Monoclonal Antibodies Against Human Hematopoietic Survival and Growth Factor," <i>Biomed. Biochim. Acta</i> , 46(5):419-427 (1987).
C18	Hiraoka et al., "In Vitro Effect of Murine Peritoneal Exudate Cells Activated with a Streptococcal Preparation, OK-432, on Hematopoietic Stem Cells," <i>ACTA Hematol. Japan</i> , 45:82-90 (1982).
C19	Hiraoka et al., <i>Cancer Research</i> , 47(19):5025-5030 (1987); Abstract, Accession No. 87301445 of Dialog File 155
C20	Hollands, "Differentiation of Embryonic Haemopoietic Stem Cells from Mouse Blastocysts Growth in Vitro," <i>Development</i> , 102:135-141 (1988).
C21	Humphries et al., "Aplastic Anemia and Stem Cell Biology," in <i>Aplastic Anemia: Stem Cell Biology and Advances in Treatment</i> , Alan R. Liss, Inc., New York, New York, pp. 3-12 (1984)
C22	Jones et al., "Cyclic Hematopoiesis: Animal Models," <i>Exp. Hematol.</i> , 11:571-580 (1983).
C23	Kamamoto et al., "Establishment of Two Ph ⁺ Chromosome-Positive Cell Lines, KPB-M8 and KPB-M15," <i>Jpn. J. Clin. Oncol.</i> , 16:107-115 (1986).
C24	Kawasaki et al., "Molecular Cloning of a Complementary DNA Encoding Human Macrophage-Specific Colony-Stimulating Factor (CSF-1)," <i>Science</i> , 230:291-296 (1985).
C25	King, R.C. et al., in <i>A Dictionary of Genetics</i> , Fifth Edition, Oxford University Press, p. 138 (November, 1996).
C26	Kriegler et al., "Sources of Murine Macrophage Colony-Stimulating Factor that also Contain Growth Factors for Primitive Macrophage Progenitor Cells," <i>Exp. Hematol.</i> , 12:844-849 (1984).
C27	Kriegler et al., "Partial Purification and Characterization of a Growth Factor for Macrophage Progenitor Cells with High Proliferative Potential in Mouse Bone Marrow," <i>Blood</i> , 60:503-508 (1982).
C28	Langley et al., "Soluble Stem Cell Factor in Human Serum," <i>Blood</i> , 81(3):656-660 (1993).
C29	Lee et al., "Isolation of cDNA for a Human Granulocyte-Macrophage Colony-Stimulating Factor by Functional Expression in Mammalian Cells," <i>Proc. Natl. Acad. Sci., USA</i> , 82:4360-4364 (1985).
C30	Lev, S. et al., "Steel Factor and c-kit Protooncogene: Genetic Lessons in Signal Transduction," <i>Critical Reviews in Oncogenesis</i> , 5:141-168 (1994).
C31	Lewin, ed. <i>Genes II</i> , John Wiley & Sons, New York, p. 681 (1985)
C32	Lyman et al., "Molecular Cloning of a Ligand for the flt3/flk-2 Tyrosine Kinase Receptor: A Proliferative Factor for Primitive Hematopoietic Cells," <i>Cell</i> , 75:1157-1167 (1993).

EXAMINER

DATE CONSIDERED

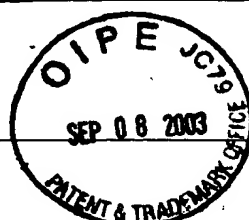
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		Filing Date June 26, 2000	Group 1647

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
C33	Lyman et al., "Molecular Cloning of a Ligand for the flt3/flk-2 Tyrosine Kinase Receptor: A Proliferative Factor for Primitive Hematopoietic Cells," Abstract 335, American Society of Hematology (1993).	
C34	MacKenzie, M.A.F. et al., "Activation of the Receptor Tyrosine Kinase Kit is Required for the Proliferation of Melanoblasts in the Mouse Embryo," <i>Developmental Biology</i> , 192:99-107 (1997).	
C35	March et al., "Cloning, Sequence and Expression of Two Distinct Human Interleukin-1 Complementary DNAs," <i>Nature</i> , 315:641-647 (1985).	
C36	Martin et al., "Primary Structure and Functional Expression of Rat and Human Stem Cell Factor DNAs," <i>Cell</i> , 63:203-211 (1990).	
C37	Martin, P., "HEL Cells: A New Human Erythroleukemia Cell Line with Spontaneous and Induced Globin Expression," <i>Science</i> , 216:1233-1235 (1982).	
C38	Mayer, T.C. et al., "An Experimental Analysis of the Pigment Defect Caused by Mutations at the W and SI Loci in Mice," <i>Developmental Biology</i> , 18:62-75 (1968).	
C39	McDermott et al., "Inhibition of Cell Proliferation in Renal Failure and Its Significance to the Uraemic Syndrome: A Review," <i>Scot. Med. J.</i> , 20:317-327 (1975).	
C40	McNiece et al., "A Growth Factor Produced by WEHI-3 Cells for Murine High Proliferative Potential GM-Progenitor Colony Forming Cells," <i>Cell Biol. Int. Rep.</i> , 6:243-251 (1982).	
C41	McNiece et al., "Studies on the Myeloid Synergistic Factor From 5637: Comparison with Interleukin-1 Alpha," <i>Blood</i> , 73:919-923 (1989).	
C42	McNiece et al., "Detection of Muring Hemopoietin-1 in Media Conditioned by EMT6 Cells," <i>Exp. Hematol.</i> , 15:854-858 (1987).	
C43	McNiece et al., "Synergistic Interactions Between Hematopoietic Growth Factors as Detected by in vitro Mouse Bone Marrow Colony Formation," <i>Exp. Hematol.</i> , 16:383-388 (1988).	
C44	Moore, M.A.S., "Clinical Implications of Positive and Negative Hematopoietic Stem Cell Regulators," <i>Blood</i> , 78:1-19 (1991).	
C45	Mori et al., "Myeloproliferative Sarcoma Virus Stimulates Pluripotent Hematopoietic Stem Cells and Provokes Tumoral Transformation of the Hematopoietic Microenvironment in Vitro," <i>Leukemia Research</i> , 7:77-86 (1983).	
C46	Nabel et al., "Inducer T Lymphocytes Synthesize a Factor That Stimulates Proliferation of Cloned Mast Cells," <i>Nature</i> , 291:332-334 (1981).	
C47	Nagata, S., et al., "Molecular cloning and expression of cDNA for human granulocyte colony-stimulating factor," <i>Nature</i> , 319:415-418 (1986).	
C48	Ngo et al., "Computational Complexity Protein Structure Prediction, and the Levinthal Paradox," In <i>The Protein Folding Problem and Tertiary Structure Prediction</i> , Merz et al., (eds.), 1994 pp.433-495	
C49	Qiu et al., "Primary Structure of c-kit: Relationship with the CSF-1/PDGF Receptor Kinase Family-Oncogenic Activation of v-kit Involves Deletion of Extracellular Domain and C Terminus," <i>EMBO J.</i> , 7(4):1003-1011 (1988).	
C50	Ross, M.H. et al., In <i>Histology A Text and Atlas</i> , Coryell, P.A. (Ed.), Third Edition Williams & Wilkins, Baltimore, MD, USA, pp.54-55, 58-59, 106-107, 200-202, 206 and 375 (1995).	
C51	Sarvella, P.A. et al., "Steel, A New Dominant Gene in the House Mouse, With Effects on Coat Pigment and Blood," <i>The Journal of Histology</i> , 47:123-128 (1956).	
C52	Schrader, "Role of a Single Haemopoietic Growth Factor in Multiple Proliferative Disorders of Haemopoietic and Related Cells," <i>Lancet</i> , 2:133-137 (1984).	

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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
C53	Song et al., "Hematopoietic Factor Production by a Cell Line (TC-1) Derived from Adherent Murine Marrow Cells," <i>Blood</i> , 66:273-281 (1985).	
C54	Spangrude et al., "Purification and Characterization of Mouse Hematopoietic Stem Cells," <i>Science</i> , 214:58-62 (1988).	
C55	Stanley et al., "Regulation of Very Primitive, Multipotent, Hemopoietic Cells by Hemopoietin-1," <i>Cell</i> , 45:667-674 (1986).	
C56	Watson et al., "Molecular Cloning of the Polypeptide Factors That Stimulate Growth, Maturation, and Function of Blood Cells ⁶⁰⁻⁶⁶ ," <i>Molecular Biology of the Gene</i> , Fourth Edition, pp.983-992 (1987).	
C57	Webster's Third New International Dictionary of the English Language Unabridged, Gove, P.B. et al. (Eds.), Merriam-Webster Inc., Springfield, MA, USA, p.1827 (1986).	
C58	Welte et al., "Recombinant Human Granulocyte Colony-Stimulating Factor," <i>J. Exp. Med.</i> , 165:941-948 (1987).	
C59	Wong et al., "Human GM-CSF: Molecular Cloning of the Complementary DNA and Purification of the Natural and Recombinant Proteins," <i>Science</i> , 228:810-814 (1985).	
C60	Yarden et al., "Human Proto-Oncogene c-kit: a New Cell Surface Receptor Tyrosine Kinase for an Unidentified Ligand," <i>EMBO J.</i> , 6(11):3341-3351 (1987).	
C61	Yokota et al., "Isolation and Characterization of a Mouse cDNA Clone that Expresses Mast-Cell Growth-Factor Activity in Monkey Cells," <i>Proc. Natl. Acad. Sci., USA</i> , 81:1070-1074 (1984).	
C62	Young et al., "Efficient Isolation of Genes by Using Antibody Probes," <i>Proc. Natl. Acad. Sci., USA</i> , 80:1194-1195 (1983).	
C63	Zajicek, "Inflammation Initiates Cancer by Depleting Stem Cells," <i>Medical Hypotheses</i> , 18:207-219 (1985).	
C64	Zsebo et al. "Effects of Hematopoietin-1 and Interleukin 1 Activities on Early Hematopoietic Cells of the Bone Marrow," <i>Blood</i> , 71(4):962-968 (1988).	
C65	Zsebo et al., "Stem Cell Factor Is Encoded at the Sl Locus of the Mouse and Is the Ligand for the c-kit Tyrosine Kinase Receptor," <i>Cell</i> , 63:213-224 (1990).	

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